

The RCA logo, which consists of the letters "RCA" in a bold, serif font, enclosed within a circular border.

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GENERAL DATA

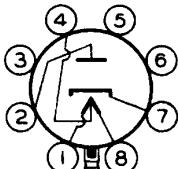
Electrical:

<u>Electrical:</u>	<u>Without</u>	<u>With No. 40</u>
	<u>Panel</u>	<u>or No. 47</u>
Heater, for Unipotential Cathode: Voltage (AC or DC):	<u>Lamp</u>	<u>Panel Lamp</u> ▲
Entire Heater (pins 1 & 8) . .	35	32 . .
Panel-Lamp Section (pins 1&4) . .	7.5	5.5 . .
Current { between pins 1 & 8 . .	0.15	- . .
{ between pins 4 & 8 . .	-	0.15 . .

▲ Under typical operating conditions shown below.

Mechanical:

Mounting Position	Any
Maximum Overall Length	3-5/32"
Maximum Seated Length	2-5/8"
Maximum Diameter	1-3/16"
Bulb	T-9
Base	Lock-in 8-Pin
Basing Designation for BOTTOM VIEW	5AL



Pin 7 - Cathode
Pin 8 - Heater
Plug - Base Shell
Panel-Lamp Heater
Section is be-
tween pins 1 & 4

HALF-WAVE RECTIFIER

Maximum Ratings, Design-Center Values:

PEAK INVERSE PLATE VOLTAGE	700 max.	volts
PEAK PLATE CURRENT	600 max.	ma
DC OUTPUT CURRENT:		
With Panel Lamp & { No Shunting Resistor . . .	60 max.	ma
Shunting Resistor . . .	90 max.	ma
Without Panel Lamp	100 max.	ma
PANEL-LAMP-SECTION VOLTAGE (RMS):		
When panel lamp fails	15 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	300 max.	volts
Heater positive with respect to cathode .	300 max.	volts

**Typical Operation With No.40 or No.47 Panel Lamp
in Circuit Below with Capacitor-Input Filter:**

AC Plate-Supply Volt. (RMS)	117	117	117	117	235	volts
Filter-Input Capacitor . .	40	40	40	40	40	μ f
Min. Total Effective						
Plate-Supply Impedance .	15	15	15	15	100	ohms
Panel-Lamp Shunting Res. .	-	300	150	100	-	ohms
DC Output Current.	60	70	80	90	60	ma

DEC. 30, 1947

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HALF-WAVE VACUUM RECTIFIER

Typical Operation Without Panel Lamp in Conventional Half-Wave Circuit with Capacitor-Input Filter:

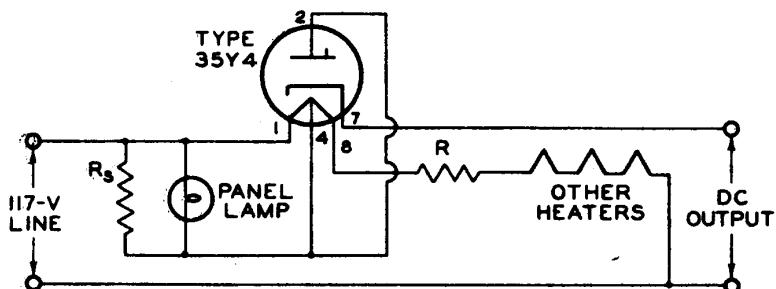
AC Plate-Supply Voltage (RMS)	117	235	volts
Filter-Input Capacitor	40	40	μ f
Min. Total Effective Plate-Supply Imped. .	15	100	ohms
DC Output Current	100	100	ma
DC Output Voltage at Input to Filter (Approx.):			
At half-load current (50 ma.)	140	280	volts
At full-load current (100 ma.)	120	235	volts
Voltage Regulation (Approx.):			
Half-load to full-load current	20	45	volts

Maximum Circuit Values:

Panel-Lamp Shunting Resistor:*

For dc output current of	{	70 ma.	800 max. ohms
		80 ma.	400 max. ohms
		90 ma.	250 max. ohms

* Required when dc output current is greater than 60 ma.



DROP ACROSS R AND ALL HEATERS (WITH
PANEL LAMP) SHOULD EQUAL 117 VOLTS AT
0.15 AMPERE. R_s = SHUNTING RESISTOR
REQUIRED WHEN DC OUTPUT CURRENT
EXCEEDS 60 MILLIAMPERES

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Many of the devices and arrangements shown or de-
scribed herein use inventions of patents owned
by RCA or others. Information contained herein
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bility for its use.

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